

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. An isolated human antibody or antigen-binding portion thereof that was expressed in a non-human animal and specifically binds to LPS from one of *Pseudomonas aeruginosa* strains Fisher Devlin (International Serogroups) It-2 (011), It-3 (02), It-4 (01), It-5 (010), It-6 (07), PA01 (05), 170003 (02), IATS016 (02/05), and 170006 (02).

2. The isolated human antibody or antigen-binding portion thereof according to claim 1, wherein said human antibody is a monoclonal antibody.

3. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein the antibody or portion possesses one or more properties selected from the group consisting of:

- a) is opsonic for *Pseudomonas aeruginosa* cells;
 - b) facilitates phagocytosis of said *Pseudomonas aeruginosa* cells;
 - c) enhances the immune response to *Pseudomonas aeruginosa*;
 - d) facilitates the killing of *Pseudomonas aeruginosa* cells;
- and inhibits *Pseudomonas aeruginosa* infection.

4. (Cancelled).

5. (Cancelled).

6. (Cancelled).

7. (Cancelled).

8. (Cancelled).

9. (Cancelled).

10. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein said antibody or antigen-binding portion thereof binds to *Pseudomonas aeruginosa* LPS with a K_d selected from the group consisting of :

- a) 5×10^{-7} M to 1×10^{-7} M;
- b) 1×10^{-7} to 5×10^{-8} M, and
- c) 5×10^{-8} M to 1×10^{-8} M.

11. (Cancelled).

12. (Cancelled).

13. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein said antibody or antigen-binding portion thereof has a half-life *in vivo* of between one hour and thirty days

14. (Cancelled).

15. (Cancelled).

16. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein said antibody isotype is selected from the group consisting of: immunoglobulin G (IgG), IgM, IgE, IgA and IgD.

17. The isolated human antibody according to claim 16, wherein said IgG is a subtype selected from the list consisting of IgG1, IgG2, IgG3 and IgG4.

18. The isolated human antibody according to claim 17, wherein said IgG is the IgG2 subtype.

19. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein said antibody or portion is labeled.

20. The isolated human antibody or antigen-binding portion thereof according to claim 19, wherein said label is selected from the group consisting of: a radiolabel, an enzyme label, a fluorescent label, a toxin, a magnetic agent, a second antibody, an affinity label, an epitope tag, an antibiotic, a complement protein and a cytokine.

21. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, comprising a light chain selected from the group consisting of:

- a) a kappa light chain; and
- b) a lambda light chain.

22. The isolated human antibody or antigen-binding portion thereof according to claim 21, wherein said kappa light chain utilizes a human gene selected from the group consisting of: Vk2/A19/A3; Vk1/A30; Vk4/B3; Vk3/A27; Vk3/L2; Vk1/A30; Vk3/L2,L16; and Vk1/A30.

23. (Cancelled).

24. (Cancelled).

25. (Cancelled).

26. The isolated human antibody or antigen-binding portion thereof according to claim 21, wherein said kappa light chain comprises an amino acid sequence selected from the group consisting of: SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; and SEQ ID NO: 30.

27. (Cancelled).

28. (Cancelled).

29. (Cancelled).

30. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein the heavy chain utilizes a human gene selected from the group consisting of: V_H3/V4-04; V_H3/V4-59; V_H3/V3-33; V_H3/V3-15; V_H6/V6-01; and V_H5/V5-51.

31. (Cancelled).

32. (Cancelled).

33. (Cancelled).

34. (Cancelled).

35. (Cancelled).

36. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, comprising a heavy chain that comprises an amino acid sequence selected from the group consisting of: SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; and SEQ ID NO: 21.

37. (Cancelled).

38. The antigen-binding portion according to claim 1 or claim 2 selected from the group consisting of: an Fab fragment, an F(ab')₂ fragment and an Fv fragment.

39. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein said antibody is a single chain antibody.

40. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein said antibody is a chimeric antibody.

41. The chimeric antibody according to claim 40, comprising framework regions and CDR regions from different human antibodies.

42. The chimeric antibody according to claim 40, wherein the chimeric antibody is bispecific.

43. (Cancelled).

44. The isolated human antibody or antigen-binding portion according to claim 1 or claim 2, wherein said antibody or portion is derivatized.

45. The isolated human antibody or antigen-binding portion according to claim 44, wherein said antibody or portion is derivatized with polyethylene glycol, at least one methyl or ethyl group or at least one carbohydrate moiety.

46. A pharmaceutical composition comprising the antibody or antigen-binding portion according to claim 1 or claim 2 and a pharmaceutically acceptable carrier.

47. A kit comprising the antibody or antigen-binding portion according to claim 1 or claim 2, a pharmaceutically acceptable carrier therefor, and a container.

48. (Cancelled).

49. A method for treating or preventing *Pseudomonas aeruginosa* infection, comprising the step of administering an isolated human antibody according to claim 1 or claim 2 to a patient at risk of being infected with, or currently infected with, *Pseudomonas aeruginosa*.

50. (Cancelled).

51. (Cancelled).

52. (Cancelled).

53. The method according to claim 49, wherein said antibody is labeled with a radiolabel, a toxin, a complement protein, a cytokine or an antibiotic.

54. (Cancelled).

55. The method according to claim 49 wherein said patient is a burn patient, a surgical patient, a prosthesis recipient, a respiratory patient, a cancer patient, a cystic fibrosis patient or an immunocompromised patient.

56. The method according to claim 49, wherein said pharmaceutical composition further comprises toxins, complement proteins, radiolabeled proteins, cytokines, antibiotics, or any combination thereof.

57. An isolated cell line that produces the antibody according to claim 1 or claim 2.

58. The cell line according to claim 57 wherein said cell line is a hybridoma.

59. A method of producing an isolated human antibody or antigen-binding portion thereof that specifically binds to LPS from one of *Pseudomonas aeruginosa* strains Fisher Devlin (International Serogroups) It-2 (011), It-3 (02), It-4 (01), It-5 (010), It-6 (07), PA01 (05), 170003 (02), IATS016 (02/05), and 170006 (02), comprising:

- a) culturing a non-human cell capable of producing said antibody under conditions in which the antibody is produced;
- b) isolating said antibody from said cell culture.

60. (Cancelled).

61. (Cancelled).

62. (Cancelled).

63. (Cancelled).

64. A method for making an isolated human antibody that specifically binds to LPS from one of *Pseudomonas aeruginosa* strains Fisher Devlin (International Serogroups) It-2 (011), It-3 (02), It-4 (01), It-5 (010), It-6 (07), IATS016 (02/05), and 170006 (02), comprising:

a) immunizing a non-human animal capable of producing a human antibody therein with a *Pseudomonas aeruginosa* antigenic composition;

b) allowing said non-human animal to mount a humoral response to said antigenic composition; and

c) recovering said human antibody from said non-human animal.

65. A nucleic acid molecule isolated from a non-human animal encoding the heavy chain, the light chain or both, of a human antibody or an antigen-binding portion thereof that specifically binds to LPS from one of *Pseudomonas aeruginosa* strains Fisher Devlin (International Serogroups) It-2 (011), It-3 (02), It-4 (01), It-5 (010), It-6 (07), PA01 (05), 170003 (02), IATS016 (02/05), and 170006 (02).

66. (Cancelled).

67. An isolated nucleic acid molecule, comprising a nucleotide sequence encoding an amino acid sequence selected from the group consisting of: SEQ ID NO: 13; SEQ ID NO: 14; SEQ ID NO: 15; SEQ ID NO: 16; SEQ ID NO: 17; SEQ ID NO: 18; SEQ ID NO: 19; SEQ ID NO: 20; and SEQ ID NO: 21.

68. (Cancelled).

69. (Cancelled).

70. (Cancelled).

71. (Cancelled).

72. (Cancelled).

73. An isolated nucleic acid molecule, comprising a nucleotide sequence encoding an amino acid sequence selected from the group consisting of: SEQ ID NO: 22; SEQ ID NO: 23; SEQ ID NO: 24; SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 28; SEQ ID NO: 29; and SEQ ID NO: 30.

74. (Cancelled).

75. A vector comprising the nucleic acid molecule according to any one of claims 65, 67 or 73.

76. The vector according to claim 75, wherein said vector further comprises an expression control sequence operably linked to said nucleic acid.

77. An host cell comprising

a) a nucleic acid molecule according to any one of claims 65, 67 or 73; or

b) a vector according to claim 75 or 76.

78. (Cancelled)

79. (Cancelled).

80. (Cancelled).

81. (Cancelled).

82. (Cancelled).

83. A method of producing the heavy chain or the antigen-binding portion thereof, the light chain or the antigen-binding portion thereof, or both the light chain and heavy chain or antigen-binding portions thereof, of a human antibody that specifically binds to LPS from one of *Pseudomonas aeruginosa* strains Fisher Devlin (International Serogroups) It-2 (011), It-3 (02), It-4 (01), It-5 (010), It-6 (07), PA01 (05), 170003 (02), IATS016 (02/05), and 170006 (02), comprising the step of culturing the host cell according to claims 77 under conditions in which the nucleic acid molecules are expressed.

84. (Cancelled).

85. (Cancelled).

86. A non-human transgenic animal comprising the nucleic acid molecule according to any one of claims 65, 67 or 73, wherein

said non-human transgenic animal expresses said nucleic acid molecule.

87. (Cancelled).

88. (Cancelled).

89. The non-human transgenic animal according to claim 86, wherein said animal is selected from the list consisting of a mouse, a rat, a hamster, a cow, a sheep, a primate, a horse and a pig.

90. (Cancelled).

91. (Cancelled).

92. (Cancelled).

93. (Cancelled).

94. (Cancelled).

95. (Cancelled).

96. (Cancelled).

97. The isolated human antibody or antigen-binding portion thereof according to claim 1 or claim 2, wherein the antibody or portion thereof is produced by a process comprising the steps of:

a) immunizing a non-human animal capable of producing a human antibody with an antigen selected from the group

consisting of an isolated *Pseudomonas aeruginosa* LPS preparation, a virulent *Pseudomonas aeruginosa* cell preparation, an attenuated *Pseudomonas aeruginosa* cell preparation, and a killed *Pseudomonas aeruginosa* cell preparation;

b) allowing said non-human animal to mount an immune response to said antigen; and

c) recovering said antibody from said non-human animal.

98. (Cancelled).

99. (Cancelled).

100. (Cancelled).

101. A hybridoma cell line having American Type Culture Collection Deposit Designation PTA-5384, PTA-5385 or PTA-5386.

102. A monoclonal antibody produced by the hybridoma cell line according to claim 101.

103. An isolated human antibody or an antigen-binding portion thereof, that specifically binds LPS O-specific side chain from one of *Pseudomonas aeruginosa* strains Fisher Devlin (International Serogroups) It-2 (011), It-3 (02), It-4 (01), It-5 (010), It-6 (07), PA01 (05), 170003 (02), IATS016 (02/05), and 170006 (02).

104. The antibody antigen-binding portion according to claim 103, which is monoclonal.

105. The antibody or antigen-binding portion according to claim 103 or 104, having a relative binding avidity of about 1.0.

106. The antibody or antigen-binding portion according to claim 104, that specifically binds the LPS O-specific side chain of one strain and does not bind to the LPS O-specific side chain of any other of the listed strains.

107. A passive vaccine for preventing or inhibiting *Pseudomonas aeruginosa* infection comprising one or more human monoclonal antibodies or an antigen-binding portion thereof, selected from the group consisting of the antibody or portion according to claim 1 or 102 or 103.

108. The passive vaccine according to claim 107 comprising two or more human monoclonal antibodies or an antigen-binding portion thereof, wherein said human monoclonal antibodies or portions specifically bind different strains of *Pseudomonas aeruginosa*.

109. A method for detecting the presence of *Pseudomonas aeruginosa* in a biological sample comprising the steps of contacting said sample with an antibody or antigen-binding portion thereof according to any one of claims 1 or 102 or 103.